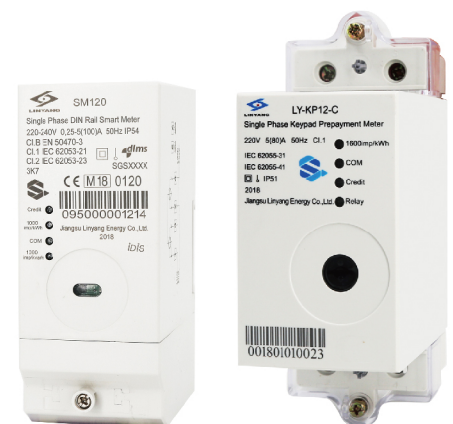


## DIN-Rail<sub>series</sub>

### INTRODUCTION

Cluster metering is a mature idea to reduce overall costs of assets and installation process as well as minimizing customer's access to metering unit, addressing a reliable revenue protection solution. LY-KP12-C as a conventional DIN-Rail prepaid meter and LY-SM120 as a smart DIN-Rail prepaid meter both support STS and DLMS COSEM applicable to residential customers, accurately measuring & monitoring load and network parameters as well as armored with enhanced anti-tampering and prepayment functions.

These two DIN-Rail meters can be installed in a cluster box that has various capacities by the number of meters (1, 2, 5, 10) and communicate with the customer interface unit (CIU) through PLC or RF. LY-SM120 can communicate with a data collector installed in the same box through RS485 communication bus or directly communicate with standard data concentrator installed under transformer through PLC or RF communication, both are interacting with HES and vending system remotely.



### MAIN FUNCTIONS



4 Quadrant Measurement



TOU



Load Profile



12 Billing Periods



Demand Monitoring



Load Control



Neutral Measurement



Event and Alarm



PQ Monitoring



Postpaid Prepaid



Neutral Line Relay



STS Support



DLMS COSEM Support



Interoperability



Anti-Tamper



Firmware Upgrade



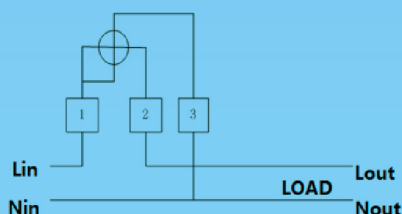
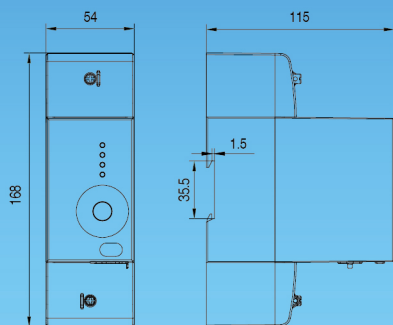
RS485 Port



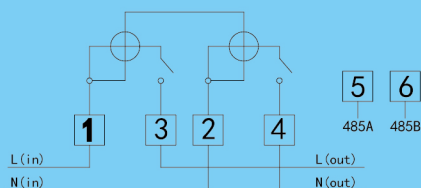
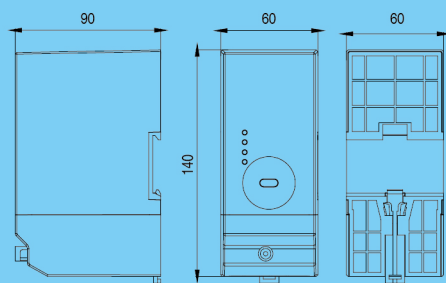
Hermetically or Ultrasonic Sealing

## DRAWING & WIRING

### KP12-C



### SM120



## SPECIFICATION

PARAMETERS		KP12-C	SM120
Electrical	Operating Mode (Postpaid/Prepaid)	Both	
	Accuracy (active and reactive energy)	1 for Active (IEC62053-21) and 2 for Reactive (IEC62053-23)	1 for Active (IEC62053-21) and 2 for Reactive (IEC62053-23)
	Connection type	1P2W	1P2W
	Nominal Voltage	110V, 120V, 220V, 230V, 240V $\pm 30\%$	110V, 120V, 220V, 230V, 240V $\pm 30\%$
	Nominal Current	5A, 10A	5A, 10A
	Max Current	60A, 80A	80A, 100A
	Starting Current (% Ib)	0.35% Ib	0.35% Ib
	Frequency	50/60Hz $\pm 1\%$	50/60Hz $\pm 1\%$
	Power Consumption (V, I)	Voltage (1.5W, 2.5VA), Current (1VA)	Voltage (1W, 2VA), Current (1VA)
	RTC	$\leq 0.5s/d$ (IEC62054-21)	$\leq 0.5s/d$ (IEC62054-21)
	Relay	100A, 250VDC, 100,000 times	100A, 250VDC, 100,000 times
	Local Communication	Optical Port	Optical Port, RS485
	CIU Communication	PLC/RF	PLC/RF
	Uplink Communication	NA	PLC/RF
	Credit & Alarm LEDs	1 credit LED (Three Colors), 1 Alarm LED	1 credit LED (Three Colors), 1 Alarm LED
	Neutral Line Relay	NA	Yes
Environmental	Temperature Range (Operation & Storage)	Operation (-40°C to +70°C), Storage (-40°C to +85°C)	Operation (-40°C to +70°C), Storage (-40°C to +85°C)
	Relative Humidity	$\leq 95\%$	$\leq 95\%$
Mechanical	IP Degree	IP54	IP54
	Meter Case	PC+10%GF	PC+10%GF
	Terminal	9mm, Brass	9mm, Brass
	Dimension, LWH (mm)	168x115x54	140x90x60
	Weight (kg)	Approx. 0.45	Approx. 0.5
Functional	Energy and/or Currency Credit Charging	Both	Both
	Load profile	6720 entries, 15 Channels, (Configurable interval: 1 to 60 min)	6720 entries, 30 Channels (Configurable interval: 1 to 60 min)
	Billing Periods	12 months	12 months
	Event log	550	550
	Measuring Values	kW, kvar, kWh, kVAh, kVA, V, I, F, PF,	kW, kvar, kWh, kVAh, kVA, V, I, F, PF,
	Tariffs	6	6
	Anti-Tampering	Magnetic Field, Meter cover open/terminal cover open, Reverse Energy	Magnetic Field, Meter cover open/terminal cover open, Bypass, Reverse Energy
	Load management Functions	Time & Power Thresholds, Over/under Voltage	Time & Power Thresholds, Over/under Voltage
Protocols & Standards		IEC62056-21/46/47(DLMS), IEC62052-11, IEC62053-21/23, IEC62055-31, etc.	IEC62056-21/46/47(DLMS), IEC62052-11, IEC62053-21/23, IEC62055-31, etc.

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